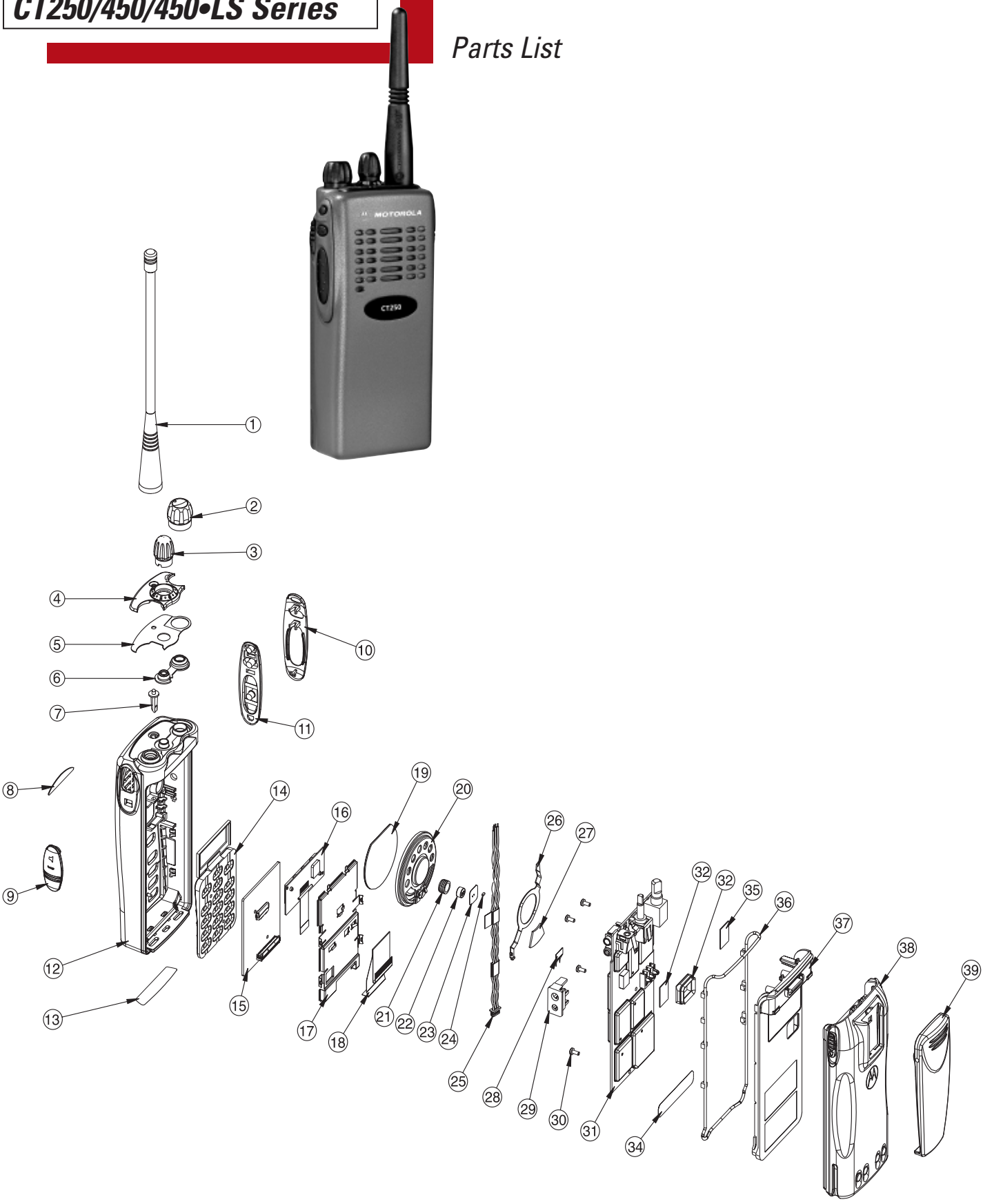
CT250/450/450•LS Series

Parts List



Parts List

REF. NO.	PART NO.	DESCRIPTION
1	---	Antenna (see antennas page)
2	**3680529Z01**	Knob, Volume
3	**3680530Z02**	Knob, Frequency
4	**1385620Z01**	Escutcheon, Top
	1385620Z03	Escutcheon, Top, LTR
5	**3385703Z01**	Label, Escutcheon
6	**3280722Z01**	Seal, Control Shaft
7	**6185621Z01**	Lightpipe, Tx
8	**HKLN4189A**	CT150 Nameplate
	HLN6821A	CT250 Nameplate
	HLN6822A	CT450 Nameplate
	HLN6823A	CT450•LS Nameplate
9	**3885617Z02**	Dust Cap
10	**1385619Z01**	Bezel, Side Control
11	**7585618Z01**	Keypad, Side Control
12	**1585616Z01**	Housing, Front (CT150/CT250)
	1585616Z02	Housing, Front (CT450/CT450•LS)
	1585616Z03	Housing, Front (CT450•LS)
13	**1380649Z03**	Escutcheon, FM models only
14	**7585623Z02**	CT450•LS Limited Keypad
	7585623Z03	CT450•LS Full Keypad
	7585942Z01	CT450 Full Keypad
15	**0104009J11**	Keypad Board Assembly (CT450/CT450•LS)
16	**5104949J08**	Display Module (CT450/CT450•LS)

REF. NO.	PART NO.	DESCRIPTION
17	**4285609Z04**	Retainer Keypad
18	**8480475Z03**	Flex, Keypad/Controller
19	**3585606Z02**	Felt, Speaker
20	**5085738Z01**	Speaker
21	**1480577C01**	Boot, Microphone
22	**5013920A04**	Microphone
23	**8485687Z01**	Flex, Microphone
24	**2113740A55**	Capacitor Chip Reel CL1 +/-30 100
25	**0980727Z01**	Connector, Wire
26	**4285601Z01**	Retainer, Speaker
27	**1480724Z01**	Insulator, Speaker
28	**3980667Z01**	Contact Finger
29	**1585608Z01**	Shroud, Jack
30	**0304726J04**	Screw, Torx T-6(M2X4.5)
31	---	Main Board (refer to service manual)
32	**7580556Z01**	Pad, Thermal
33	**3280534Z01**	Seal, Module Battery
34	**3380564Z01**	Label, FCC
35	**7585706Z01**	Pad, Chassis
36	**3280536Z01**	Gasket, "O" ring
37	**2780518Z03**	Chassis
38	---	Battery (refer to battery page)
39	**HLN9714A**	Spring Belt Clip 2.5˝

Chargers

Single Unit Charger

AAPMTN4038B 120 Volt Single Unit Rapid Rate Charger with power supply; charges both NiCd and NiMH batteries in just 90 minutes

AAPMTN4038B

Multiple Unit Charger

RLN5218A Multi-Unit Rapid Rate Charger; charges both NiCd and NiMH batteries in just 90 minutes

HLN9293A Wall Mount Bracket

RLN5218A

Motorola Conditioning Charger (MCC)

The MCC utilize negative pulse charging technology that will help extend battery life and enhance battery operation. It will safely condition and charge your specified nickel cadmium (NiCd) and nickel metal hydride (NiMH) batteries in approximately one-to-two hours. The MCC controls heat buildup due to its charging and termination algorithms and its maintenance mode allows batteries to be safely left on the charger for extended periods of time. Optional accessories are available allowing these chargers to be used in both AC and DC environments providing optimal charging flexibility.

WPPN4065BR Motorola Conditioning Charger, Four-Station Base Only, 110V (requires Adapter Plate)

WPPN4002BR 110V AC Base Charge Unit only (order adapter plates separately)

WPPN4065BR Shown With Optional Adapter Plates

WPPN4006AR 220V AC Base Charge Unit only (order adapter plates separately)

WPPN4082BR 7V Adapter Plate only

WPLN4107BR MCC Kit includes both base unit and 7V adapter, 110V AC

WPLN4106AR MCC Kit includes both base unit and 7V adapter, 220V AC

3080384G15

3080384G15 Cigarette Lighter Adapter Cord for Motorola Conditioning Charger

RLN4814A Mounting bracket for Motorola single unit conditioning charger

3080384M21 DC hard wire cable for vehicular installation (included with RLN4814A)

HLN9179A Quick-Release Attachment for Mounting Bracket RLN4814

HLN9228A Mounting accessories - Clam shell mounting bracket

Battery Maintenance System^{plus} (BMS^{plus})

Using interchangeable battery adapters (sold separately), the BMS^{plus} is capable of charging and discharging, analyzing, conditioning and cycle testing batteries. It supports NiCd, NiMH, and Li-ion battery chemistries and tracks battery voltage and capacity (mAh). The BMS^{plus} offers a 3-year warranty. Its easy-to-use design supports hundred of 2-way, cellular, and camcorder batteries. Includes serial printer* port (RS-232)

WPLN4079BR

WPLN4079BR Six-station, 110V AC, 50/60 Hz

WPLN4080BR Six-station, 230V AC, 50/60 Hz

NDN4005B Three-station 110V AC, 50/60 Hz (does not support Li-ion or 3-cell batteries)

NDN4006B Three-station 230V AC, 50/60 Hz (does not support Li-ion or 3-cell batteries)

WPPN4085AR BMS^{plus} Li-ion Field Upgrade Kit (for WPLN4079AR BMS^{plus} models)

BMS^{plus} Adapter

WPPN4083AR Adapter compatible with both NiCd and NiMH batteries (Note: if used with TDN9430, requires installation of upgrade kit CDN6142)

Battery Optimizing System II (BOS II)

No other battery analyzer matches the speed, accuracy, versatility and ease-of-use of the BOS II. New enhancements include new navigation keys and an improved, more intuitive menu system. Regular use of the BOS II can optimize battery performance and help extend battery life, reducing battery replacement costs.

WPLN4124AR BOS II 4-Station Reconditioner, 110-240 Volt AC, 50/60 Hz. Ships with US line cord.

- Supports NiCD, NiMH, Li-ion, and SLA batteries
- Increased power-programmable from 100 mAh to 4 Amps per station
- Programmable adapters allow customization of maintenance routines
- Proprietary reduction cycle restores NiCD and NiMH batteries
- Printer output for reports and labels with computer interface (Includes both 9-pin serial and 25-pin parallel ports)
- Universal Power Supply (110-240 VAC)
- Improved processing power and testing resolution, including a 3 minute Quicktest
- Interchangeable adapters accommodate nearly all major batteries

WPLN4124AR

** Compatible with the STAR Micronics SP200 Series printers (and other printers with STAR emulation); available from any STAR Micronics distributor.*

Carry Accessories

Carrying Cases

A variety of carrying accessories are available for your comfort and convenience. The carrying cases are available in sizes designed to fit your radio and battery and permit audio to be heard clearly.

Carry Cases for CT250

RLN4865A Hard leather carry case with belt loop

RLN4866A Hard leather carry case with swivel clip

RLN4867A Soft leather carry case with belt clip

RLN4868A Nylon carry case with belt loop

RLN4866A

RLN4874A

Carry Cases for CT450

RLN4874A Hard leather carry case with belt loop

RLN4873A Hard leather carry case with swivel clip

RLN4871A Soft leather carry case with belt clip

RLN4868A Nylon carry case with belt loop

Carry Cases for CT450•LS

RLN4871A Soft leather carry case with belt clip

RLN4873A Hard leather carry case with swivel clip

RLN4878A Hard leather carry case with swivel; limited keypad models only

RLN4874A Hard leather carry case with belt loop

RLN4879A Hard leather carry case with belt loop; limited keypad models only

RLN4868A Nylon carry case with belt loop

RLN4871A

Carry Accessories

HLN9844A

Belt Clip

HLN9714A 2.5˝ Spring action belt clip

HLN9844A 2˝ Spring action belt clip

Belt

4200865599 1.75˝ wide leather belt

Carrying Strap

NTN5243A Shoulder Carry Strap; for use with Carry Cases with D-rings

NTN5243A

Waterproof Bag

HLN9985B Waterproof Bag; includes a large carry strap

HLN6602A

Chest Pack

This lightweight harness is designed for a safe and secure means of carrying portable radios in a variety of applications and environments. Includes a radio holder, pen holder and secured pocket for spare batteries, tools, and other communication devices. Can be comfortably worn on the chest, with adjustable straps to fit most body shapes and heights.

HLN6602A Universal Chestpack

1505596Z02 Replacement Strap for HLN6602A/RLN4570A

Carry Accessories

Break-A-Way Chest Pack

All of the same features as the original chest pack (HLN6602A) plus break-a-way tabs that allow that allow the entire pack to be pulled off with approximately 10 lbs of pressure. Perfect for railroads, manufaturing locations, construction sites and anywhere that safety is a concern.

RLN4570A Break-A-Way Chest Pack

RLN4570A

RadioPak™

RLN4815A

Worn around the waist, it holds Two-way radios, iDEN® portables or cellular phones...keeping them right at hand. Includes a separate 6 x 8 inch zippered pouch for other on-the-job necessities. Adjustable nylon weave belt; fits both men and women.

RLN4815A RadioPAK™ Radio/Utility Case

4280384F89 Universal RadioPAK belt lengthener, fits waists larger than 40˝

Universal Holders

The RLN4943A is a great solution for forklift operators. The gooseneck bracket can be mounted inside the forklift and adjusted to the correct height for each individual driver. The universal holder will accommodate any Motorola Radio. The quick release can easily be mounted to a wheelchair with gooseneck allowing for adjustment of radio position.

RLN4943A

RLN4943A Universal holder with gooseneck bracket

RLN4944A Wheelchair quick release assembly

RLN4945A Universal holder with gooseneck bracket and wheelchair quick release assembly

Audio Accessories

Remote Speaker Microphone

HMN9030A

Allows you to talk and listen without removing the radio from the belt, case or charger. Ideal for high noise level environments. This water resistant compact unit has a coiled cord, PTT switch and black cover clothing clip.

HMN9030A* Remote Speaker Microphone

HKN9094A Replacement Coiled Cord for HMN9030A

Epaulet Strap

Black leather epaulet strap secures remote speaker microphone to epaulet of shirts or jackets and attach around cord or back of microphone. Allows reliable communications in hostile environments with velcro or clip style strap.

RLN4294A

RLN4294A Velcro Epaulet Strap

RLN4295A Small clip epaulet strap

RLN4295A

** Intrinsically safe*

Audio Accessories

Surveillance Kits

Surveillance accessories allow the user to privately receive communications with the earpiece and are ideal when environments require discrete communications.

HMN9727B* Receive-only Surveillance Kit, beige (single-wire)

RLN4894A Receive-only Surveillance Kit, black (single-wire)

HMN9752B* Receive-only Surveillance Kit with volume control, beige

HMN9754D Surveillance Kit with microphone and push to talk combined, beige (two-wire)

RLN4894A

HMN9754D

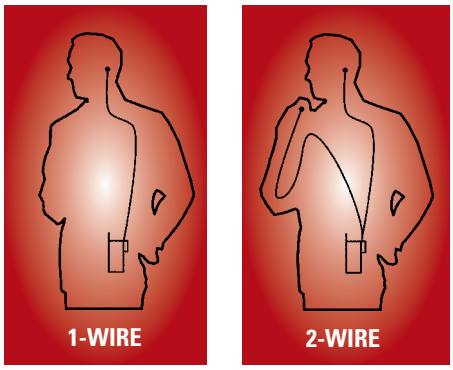
RLN4895A Surveillance Kit with microphone and push to talk combined, black (two-wire)

RLN5198AP Beige Two-wire Surveillance Kit with Clear Comfortable Acoustic Tube - Resale Packaged

Surveillance Kit Replacement Accessories

5080370E97 Standard Rubber Eartips, Clear.

5080384F72 Replacement Foam Plugs. Pack of 50. For use with NTN8370A. Noise reduction rating = 24dB

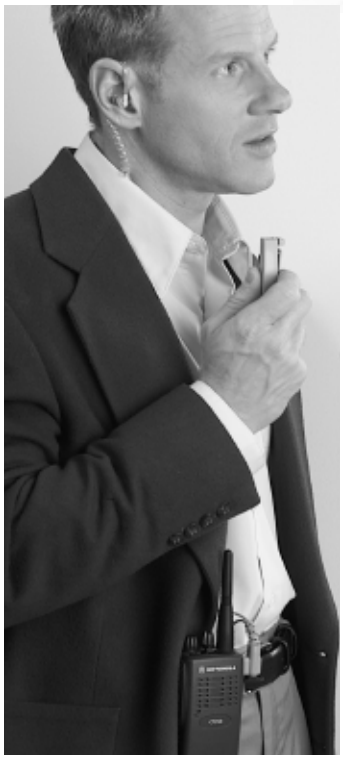


Audio Accessories

Surveillance Kits with Extended Wear Comfort Earpiece

These kits include a comfort earpiece with a rubber ear tip and a clear comfortable acoustic tube. Users hear transmissions clearly, while the clear tube provides a discreet appearance.

RLN5318A



RLN5318A Two-Wire Comfort Earpiece with Combined Microphone and Push-To-Talk

RLN5317A Two-Wire Comfort Earpiece with Combined Microphone and Push-To-Talk

** Intrinsically safe*

Audio Accessories

Completely Discrete Earpiece

Enables users to communicate with ease, in full privacy, without visible equipment. This miniaturized receiver is discretely hidden in the ear, where it fits comfortably for long periods at a time. Small as it is, it offers a full range of audio functions including automatic squelch, automatic gain control and noise filtering. Average battery life is approximately 100 hours and includes an end-of-life battery circuit generating a warning signal when the battery needs to be changed.

Kit includes wireless receiver plus an inductive neckloop. Just remove the earpiece on any standard 2- or 3- wire Motorola surveillance kit (sold separately) and plug in the neckloop to use. Kit includes 6 spare batteries and 5 replacement ear wax guards.

RLN4922A

RLN4922A Completely Discrete Earpiece Kit

RLN4919A Replacement Ear Wax Guards, 5 per pack

RNN4005A Replacement 1.4V Battery, 6 per pack

Noise Kits

Lightweight translucent tube attaches to Motorola surveillance accessories. Clothing clip prevents the accessory from being pulled from the ear due to body movement or head rotation.

NTN8370A Extreme noise kit, includes 2 foam earplugs for loud environments, provides 24dB of noise reduction

NTN8370A

Audio Accessories

NTN8371A Low noise kit, includes rubber eartip for low noise environments, does not provide hearing reduction

5080369E39† Extra Loud Earphone. Beige.

5080370E91† Extra Loud Earphone. Black.

Surveillance Replacement Accessories

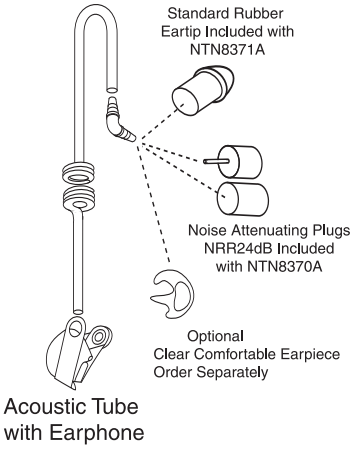
5080384F72 Replacement foam plugs; pack of 50 (For use with NTN8370A)

5080370E97 Standard Rubber Eartips, Clear

Clear Comfortable Earpiece

The clear comfortable earpiece forms to the inside of your ear and is perfect for low noise environments. Compatible with the NTN8371A, clear acoustic tube assembly, and most surveillance kits (1-, 2-, and 3-wire). This earpiece is made of easy to clean chemically inert, hypoallergenic material. Does not provide hearing protection. There are 3 items needed to make this product work:

1. Clear comfortable earpiece
2. Clear acoustic tube assembly (NTN8371A)
3. Surveillance kits



RLN4760A Small custom earpiece, right ear

RLN4763A Small custom earpiece, left ear

RLN4761A Medium custom earpiece, right ear

RLN4764A Medium custom earpiece, left ear

RLN4762A Large custom earpiece, right ear

RLN4765A Large custom earpiece, left ear

RLN4760A

† Extra Loud Earphone exceeds OSHA limits.

Audio Accessories

Ear Microphone System (EMS)

BDN6646C

This compact unit picks up the voice through bone vibrations in the ear canal. The miniature earpiece leaves the hands free and face unobscured when worn by rescue and hazard protetion personnel, who still retain the ability for direct hearing and speaking. For personnel required to wear breathing apparatus, communications with protective masks are as clear as communications without. And its high speech clarity under noisy environments make it ideal for high noise environments. Available in PTT or voice activated (VOX).

BDN6646C* Ear microphone for standard noise levels (up to 95dB) with push to talk interface (HLN8096 security clamp is recommended and must be ordered separately)

BDN6706B Ear microphone for standard noise levels (up to 95dB) with push to talk voice activated interface module (HLN8096 security clamp is recommended and must be ordered separately)

Audio Accessories

Ear Microphone System (EMS) Accessories

0180358B38

0180358B38 Ring Push-To-Talk Switch for Ear Microphone System

0180300E83 Remote Push-to-Talk Body Switch

0180300E25 Earguard with adjustable loop, secures ear mic in ear

0180358B33

0180358B32 Small size black earholder secures microphone in ear

0180358B33 Medium size black earholder secures microphone in ear

0180358B34 Large size black earholder secures microphone in ear

0180358B35 Small size clear earholder secures microphone in ear

0180358B36 Medium size clear earholder secures microphone in ear

0180358B37 Large size clear earholder secures microphone in ear

4280369E44 Replaceable belt clip with screws

5080358B28 Medium size black eartips (10 per pack)

5080358B29 Large size black eartips (10 per pack)

5080358B30 Medium size beige eartips (10 per pack)

5080358B31 Large size beige eartips (10 per pack)

Flexible Ear Receiver

BDN6720A

Single wire, receive only earpiece provides discrete receipt of communication. Adjustable earloop fits comfortably and securely outside of the ear. Security clamp is recommended and must be ordered separately.

BDN6720A* Black Flexible ear receiver earpiece without volume control

7580372E11 Replacement Foam Ear Cushion for BDN6720A

** Intrinsically safe*

Audio Accessories

Pelet Style Earpieces

The Pellet Style Earpiece allows the user to receive communication discreetly and is comfortable for extended wear use.

HMN9036A Earbud with Microphone and Push-To-Talk

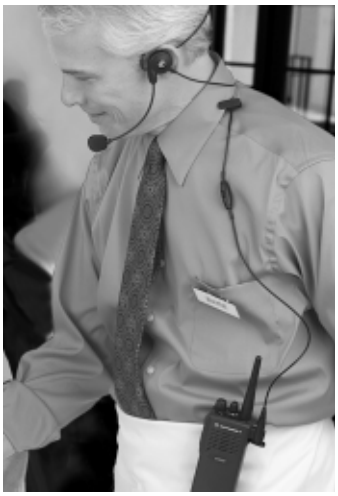
HLN9132A Single-Wire Receive Only Earbud

HMN9036A

Ultra-Lite Headset

Designed with a sleek new look that fits right in with Restaurant and Hospitality industries. Lightweight, behind-the-head style design provides comfort and mobility. Includes flexible boom microphone and in-line Push-To-Talk button.

RLN5411A Ultra-light Headset



RLN5411A

Ultra-Lite Earpiece

PMMN4001A Ultra-lite earpiece with microphone and push to talk

PMMN4001A

* Intrinsically safe

Audio Accessories

Lightweight Headsets

RMN4016A

Lightweight headsets allow for high clarity, hands free, discrete two way communications while adding comfort for extended wear in moderate noise environments. No adapter required.

RMN4016A Lightweight single muff headset with swivel boom microphone for left or right ear operation with in-line PTT button

HMN9013A* Lightweight adjustable headset with swivel boom microphone (HLN8096 security clamp recommended ordered separately, compatible with internal VOX)

REX4648A Replacement foam earpad and windscreen kit for RMN4016A, HMN9013A, BDN6773A, NMN6245A, AARMN4018A and AARMN4013A

NFL Style Lightweight Headset

This single-muff headset takes its styling cue from the Motorola headsets used by NFL coaches in football stadiums around the country. Ergonomically-designed for all-day comfort, it's ideal for both sports and special events. Features a noise canceling boom microphone and in-line Push-to-Talk. Large Motorola logo adds a sporty appearance.

RLN5238A NFL Style Lightweight Headset

RMN5047A Single-Muff, Heavy-Duty Headset with Swivel Boom Microphone

RMN5047A

RLN5238A

Audio Accessories

Medium Weight Headsets

Medium weight headsets offer high clarity sound with the additional hearing protection necessary for providing consistent, clear two way radio communication in harsh, noisy situations.

HMN9021A

HMN9021A Medium weight muff headset, over the head noise reduction rating = 24dB (HLN8096 security clamp recommended ordered separately)

HMN9022A

HMN9022A Medium weight dual muff headset, behind the head (can be worn with helmet); noise reduction rating = 24dB (HLN8096 security clamp recommended ordered separately)

BDN6647G Medium weight single speaker headset with boom microphone (HLN8096 security clamp recommended – order separately complete with internal VOX)

3580371E59 Replacement windscreen (for boom microphone); for use with BDN6647G

5080371E66 Replacement earpad for BDN6647G

Audio Accessories

Noise-Canceling Headsets with Boom Microphone

Ideal for two-way communication in extremely noisy environments. Dual-muff tactical headsets include two microphones on the outside of the earcups which reproduce the ambient sound back into the headset. Harmful sounds are suppressed to a safe level and low sounds are amplified up to 5 times the original level, but never more than 82dB(A). Includes on/off volume control on earcups and 3-foot coiled cord. Easily replaceable earseals are filled with liquid and foam combination to provide excellent sealing and comfort. Requires separate in-line PTT adapter cable. Hardhat not included.

RMN4052A

RMN4053A

RMN4052A Tactical Headband Style Headset, grey; noise reduction rating of 24dB

RMN4053A Tactical Hardhat Mount Headset, grey; noise reduction rating of 22dB

RKN4094A In-Line PTT Adapter Cable; for use with RMN4051A, RMN4052A and RMN4053A

RKN4923A Replacement Earseals for RMN4051B/RMN4052B/RMN4053A. Includes 2 snap-in earseals. Recommended replacement interval; once every 6 months to ensure constant level of attenuation, hygiene and comfort.

Audio Accessories

Hardhat Mount Headset with Noise-Canceling Boom Microphone

Ideal for two-way communication in high noise environments; mounts easily to hardhats with slots, excellent noise reduction of 22dB. Easily replaceable earseals are filled with liquid and foam combination to provide excellent sealing and comfort. 3-foot coiled cord assembly. Requires separate in-line PTT adapter cable. Hardhat not included.

RMN4051A

RMN4051A Two-Way Hardhat Mount Headset, black

RKN4094A In-Line PTT Adapter Cable; for use with RMN4051A, RMN4052A and RMN4053A

Racing Headset

Racing Headset - Same headset worn by pit crews on the CART racing circuit. Heavy Duty, behind the head Headset with Noise Cancelling Swivel Boom Microphone. Noise Reduction Rating = 24dB (adapter cable required and sold separately)

RMN5015A

RMN5015A Racing Headset

RKN4090A Adapter Cable for Racing Headset (RMN5015)

Heavy Duty Headsets

Heavy duty headsets include noise-canceling boom microphones and can be worn with or without a hardhat. The Push-to-Talk switch is located on the earcup. The VOX module is contained within the headset on voice activated units.

BDN6648C

BDN6648C* Heavy duty headset with noise cancelling boom microphone, noise reduction rating =24dB

** Intrinsically safe*

Antennas

Stubby Antennas for CT150/CT250/CT450

This quarterwave stubby antenna is ideal when radio is worn on the belt because the short antenna is non-obtrusive.

PMAD4012A
VHF Stubby Antenna, 136-155 MHz

PMAD4025A
VHF Stubby Antenna, 150-161 MHz

PMAD4013A
VHF Stubby Antenna, 155-174 MHz

PMAE4002A
UHF Stubby Antenna, 403-430 MHz

8504762J08
UHF Stubby Antenna, 430-470 MHz

PMAD4012A

Flexible Whip Antennas for CT150/CT250/CT450

Flexible whip antennas have a one-piece finish and steel core for optimal radiation characteristics. Provides more comfort when radio is worn on the belt.

8504762J01
VHF Flexible Whip Antenna, 136-155 MHz

PMAD4023A
VHF Flexible Whip Antenna, 150-161 MHz

8504762J02
VHF Flexible Whip Antenna, 155-174 MHz

NAE6483AR
UHF Flexible Whip Antenna, 403-512 MHz

NAD6579A
VHF Flexible Whip Antenna, 148-161 MHz

NAD6502AR
VHF Heliflex Antenna, 146-174 MHz

NAD6502A

Antennas

Stubby Antennas for CT450•LS

Stubby antenna is ideal when radio is worn on the belt because the short antenna is non-obtrusive.

8504762J01
UHF Stubby Antenna, 430-470 MHz

PMAE4006A
UHF Stubby Antenna, 465-490 MHz

PMAE4008A
UHF Stubby Antenna, 465-512 MHz

PMAE4007A
UHF Stubby Antenna, 490-512 MHz

Flexible Whip Antennas for CT450•LS

Flexible whip antennas have a one-piece finish and steel core for optimal radiation characteristics. Provides more comfort when radio is worn on the belt.

NAE6483AR
UHF Flexible Whip Antenna, 403-512 MHz

NAE6483AR

Miscellaneous

Assistive Turning Knobs

Customers who wear large gloves...people with mobility or dexterity limitations...virtually anyone with limited hand use will appreciate this added convenience. Set of two specially designed knobs for volume control and channel changing on all Professional Series and CT series radios.

RLN4890A Assistive turning knobs

RLN4890A

Option Board

AARLN4855A Option Board DTMF Decode

Portable Batteries

Nickel-Cadmium Premium

Part Number: **PMNN4021AR**
Volts: 7.5
Avg. mAh: 1100
Height: 4-13/16˝
Intrinsically Safe: No

Nickel Metal Hydride Premium

Part Number: **PMNN4018AR**
Volts: 7.5
Avg. mAh: 1250
Height: 4-13/16˝
Intrinsically Safe: No

Part Number: **PMNN4019AR**
Volts: 7.5
Avg. mAh: 1100
Height: 4-13/16˝
Intrinsically Safe: Yes

PMNN4018AR

Service Aids

AA0180305G54 Battery Eliminator Cable

AA0180305H20 Battery Eliminator Fixture

AA8180384J58 Housing Eliminator

AAPMKN4003A Cloning Cable 2.5mm

AAPMKN4004A Test/Programming Cable

RKN4073A Cloning cable (Multi language manual)

RKN4075A Ribless programming cable provide interface between computer and radio - not compatible with rib. (Multi language manual)

RLN4460C Portable test set, enables connection to audio/accessory jack; allows switching from radio testing

RLN4510A Battery eliminator 7.5V regulator, work in combination with shop battery block (AA0180305G54)

Programming Software

HVN6053E Programming Software

8264934B01 Programming Firmware for Vehicular Adapters

Manuals

0180305J46	Ear Microphone System and Temple Transducer CD-ROM
6881093C20	CT150/CT250 Portable User Guide
6881093C22	Basic Service Manual English
6881093C55	Detailed Service Manual English
6881093C16	CT450 Portable User Guide
6881093C21	CT450•LS Portable User Guide
6881093C78	User Manual for Vehicular Adapters